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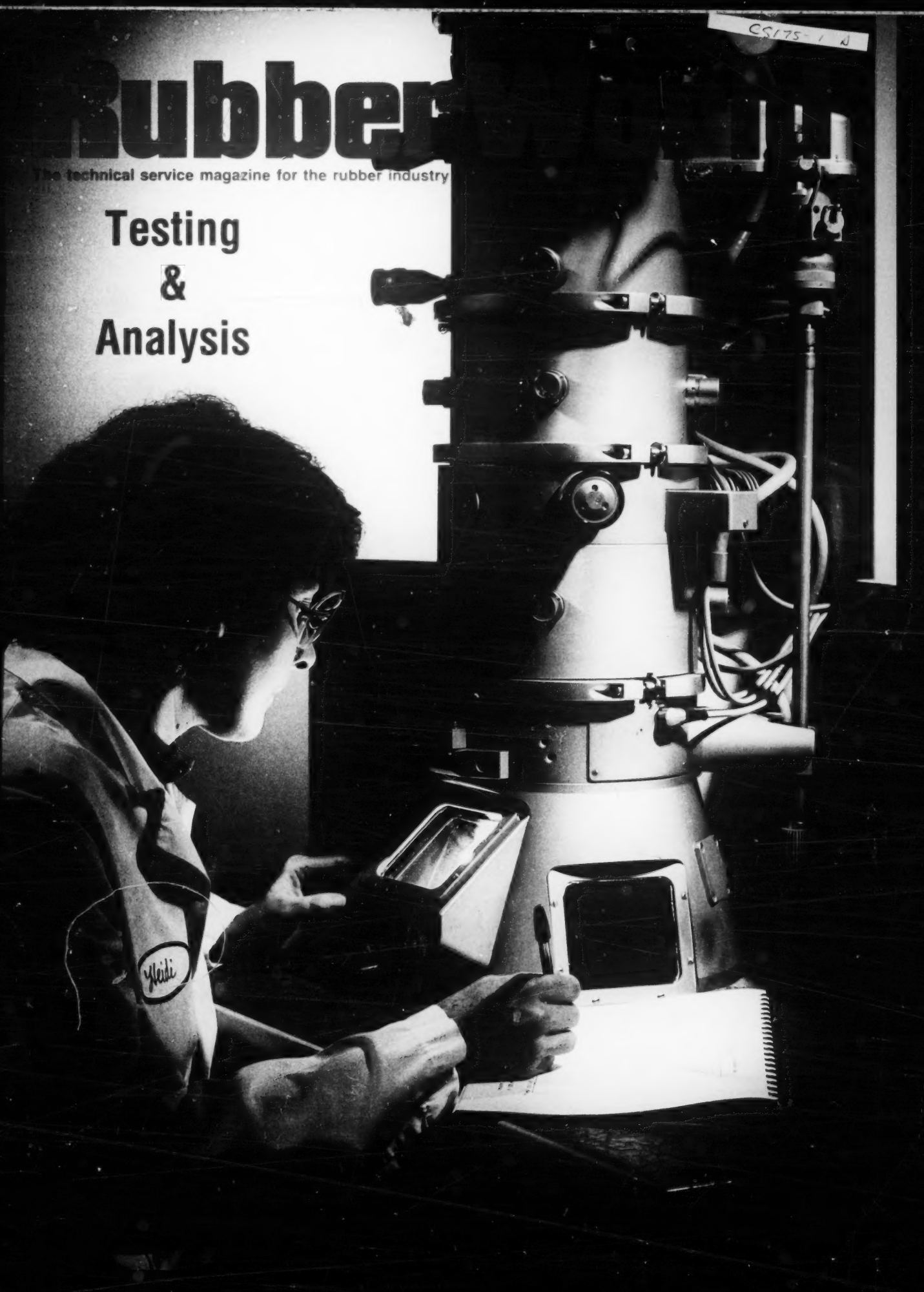
Rubber

The technical service magazine for the rubber industry

Testing & Analysis



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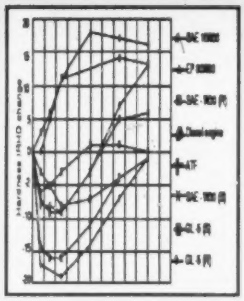

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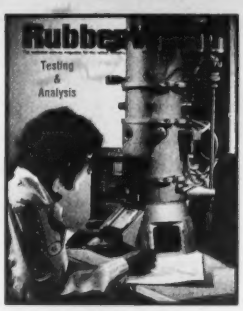

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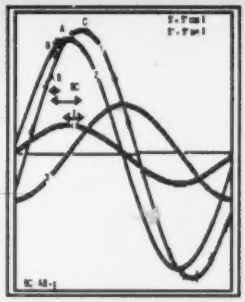

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The Audit Bureau

Editorial

Happy New Year, and for that matter, happy new decade. Let's hope the 90s provide a little more stability to the rubber industry than the 80s did, but I doubt it. The political events in Eastern Europe coupled with the market unification of the remainder of Europe scheduled for 1992 already portend significant changes will take place. It might be hard to top the 80s with its friendly and hostile takeovers, leveraged buy-outs and aggressive maneuvers by foreign rubber firms in the North American market.

The tire segment of the industry bore most of the change in the decade, but the non-tire sector appears to be going through similar changes. Akron, the rubber capital of the world, only produces specialty tires. Firestone is owned by Bridgestone. General Tire is owned by Continental. Armstrong was bought by Pirelli. Uniroyal and BFGoodrich merged tire operations and Michelin will soon own that. Goodyear survived a hostile takeover attempt but at a serious cost. Goodyear also lost its number one ranking in the rubber industry. Polysar is now Nova Corp. I could go on.

It's hard to imagine the decade we just entered being as hectic but you had better be prepared. Some predicted a restructuring of the industry, but no one guessed the severity or quickness with which it came about. So what lies ahead for the 90s? Obviously political events will have a major bearing on business. Just when companies were planning strategies for the upcoming European Economic Community, Eastern Europe becomes a factor. The effects of the numerous LBOs will begin to bear on company decisions as well. But I'm guessing that all of these factors are going to take a back seat to the environment in the coming 10 years.

The people are going to demand (it has already begun) cleaner air, water, land and workplace. Company planners would be wise to scrutinize each operation and ascertain just how to reduce or eliminate pollution in each area because the population is going to demand it. It would behoove the industry, just as the plastics industry is doing, to initiate the action instead of having it legislated for you. Indiscriminate pollution, which appears to have little concern for the environment, will not be tolerated. The industry must start working with governments on a local and national basis to show that a cleaner environment is also our concern and not something that we're going to do only if forced. Because if it comes to that, you most likely won't like the legislation.

Don R. Smith
Editor

RubberWorld

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Business Briefs

proprietary PO/SM technology and **Mobil/Badger EB** technology. The plant will have an annual rated capacity of 500 million pounds of PO and 1,125 million pounds of styrene. Field construction will begin in the first quarter of 1990, with startup scheduled for the fourth quarter of 1991.

Reed Plastics added an Atlas Xenon arc weatherometer to its Albion, MI, facility, allowing the company both carbon arc and xenon arc capabilities in its service to automobile manufacturers. The Atlas Ci35a xenon weatherometer tests the durability of textiles, plastics, coatings and colorants.

Procedyne, a manufacturer of fluid bed retort furnaces, recently relocated to expanded facilities in New Brunswick, NJ. The 60,000 sq. ft. facility provides for major expansion and modernization of Procedyne's production facilities, laboratories and general offices.

The **Avecor, Inc.** business unit of **M.A. Hanna** located in Vonore, TN, completed the previously announced purchase of **Gulf Plastics Ltd.**, of Vancouver, British Columbia, for undisclosed terms.

Chemische Werke Lowi formed a wholly owned subsidiary in the United States which will be known as **Lowi Chemical Corp.** Corporate offices will be maintained in Akron, OH, and warehouses have been established throughout the United States. Lowi Chemical will market and distribute the line of Lowinox phenolic antioxidants to the rubber industry. Chemische Werke Lowi also plans to expand its Waldkraiburg, West Germany production facility, which should be competed in 1990.

International Scientific Instruments, suppliers of electron microscopes, relocated its headquarters from Milpitas, CA, to a 24,000 square foot complex in Pleasanton, CA. The facility will provide expanded applications development and product demonstration facilities, as well as house a greatly expanded inventory of instrument spare parts.

RMA rubber report through September
(figures in metric tons)

	YTD 1989	YTD 1988	% chg.
Total new rubber			
New rubber available	2,673,843	2,573,646	3.9
Imports	951,833	826,893	15.1
Exports	375,536	435,537	-13.8
Apparent consumption	2,268,685	2,147,371	5.6
Total natural rubber			
Imports	696,865	632,380	10.2
Exports	24,590	37,649	-34.7
Apparent consumption	687,017	633,131	8.5
Total synthetic rubber			
Production	1,722,008	1,746,752	-1.4
Imports	254,968	194,513	31.1
Exports	350,946	397,888	-11.8
Apparent consumption	1,581,663	1,514,234	4.4
Total SBR			
Production	663,352	678,406	-2.2
Imports	81,933	68,577	19.5
Exports	132,127	148,492	-11.0
Apparent consumption	598,842	578,468	3.5
Total nitrile			
Production	51,940	56,986	-8.8
Imports	12,763	12,427	2.7
Exports	14,288	11,930	19.8
Apparent consumption	49,528	56,944	-13.0
Polybutadiene			
Production	311,350	303,107	2.7
Imports	50,991	59,635	-14.5
Exports	61,501	49,047	25.4
Apparent consumption	286,513	303,693	-5.7
Ethylene-propylene			
Production	196,829	198,879	-1.0
Imports	28,447	9,518	198.9
Exports	37,404	39,691	-5.8
Apparent consumption	175,899	170,766	3.0
Butyl, polychloroprene, polyisoprene, silicone and other synthetic elastomers			
Production	498,539	509,375	-2.1
Imports	80,834	44,356	82.2
Exports	105,626	48,728	-29.0
Apparent consumption	470,883	404,351	16.4

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Business Briefs

Contracts, licenses

The **Sunprene Co.**, a joint venture company between Akron, OH-based **A. Schulman** and Tokyo-based **Mitsubishi Kasei Vinyl** began production operations at the Schulman facility in Bellevue, OH. The company will produce high performance flexible polymers for North American automakers and other industries, using Mitsubishi Kasei Vinyl's specialized technology. The Sunprene Co., owned 70 percent by Schulman, will produce 10 million pounds of polymer compounds annually, which will be distributed in the United States, Canada and Mexico. The Bellevue facility will produce Sunprene's three product lines - Sunprene, Vinika and Sunfrost.

Oliver Rubber, Oakland, CA, granted a license to **Asia Tyre and Tread** (ATT) of Kuala Lumpur, to manufacture and distribute precure tread rubber in Malaysia. The precure rubber will be manufactured at a new plant in Penang. The joint venture also involves **Elgi Tyre & Tread** of India. Elgi Tyre & Tread broke ground for its third precure manufacturing plant in Kottai, Kerala, which will also use Oliver's technology. It is expected to open in 1990.

Exfluor Research Corp., Austin, TX, will provide certain technology for direct fluorination of ethers to **3M**, St. Paul, MN, as part of a licensing agreement. Exfluor has developed capabilities for adding elemental fluorine directly to organic molecules to give high yields of fluorinated products. The technology will be used to augment 3M's range of fluorinated materials available to customers in the rubber processing industry.

RMA tire report - September
(figures in thousands of units)

Passenger tires	YTD '89	YTD '88	% change
Shipments			
original equipment	39,748	40,147	-1.0
radial	34,693	34,216	1.4
replacement	115,368	115,717	-0.3
radial	109,590	108,216	1.3
export	9,619	7,080	35.9
radial	8,970	6,290	42.6
total	164,734	162,945	1.1
radial	153,254	148,721	3.0
Production	134,302	131,376	2.2
radial	125,457	119,541	4.9
Truck & bus tires			
Shipments			
original equipment	6,452	6,650	-3.0
radial	5,368	4,891	9.7
replacement	26,387	25,209	4.7
radial	15,682	14,740	6.4
export	2,673	2,439	9.6
radial	1,990	1,898	4.9
total	35,512	34,298	3.5
radial	23,039	21,529	7.0
Production	29,124	27,483	6.0
radial	19,498	16,897	15.4

Dutch-based Akzo and **U.S.-based PQ Corp.** formed a joint venture, **Akzo-PQ Silica**, to manufacture and market certain silica-based products in Europe. The joint venture began operations January 1, 1990, with headquarters in Amersfoort, The Netherlands, and will maintain manufacturing plants in Winschoten, The Netherlands; Duren, West Germany; Vienna, Austria; and Karlstad, Sweden. Co-managing directors nominated by each partner will guide operations, and sales and marketing activities will be coordinated with those of the Akzo organization currently operating in the region.

Hoechst Celanese formed a Mexican subsidiary, **Hoechst CelMex Performance Products** (HCPP Mexicana) as a joint venture between **Celanese Mexicana, S.A., Quimica Hoechst de Mexico, S.A.**, and Hoechst Celanese. The subsidiary will be responsible for the manufacture, sales and service of engineering plastics in Mexico and Central America and will receive support from compounding facilities in Xacapu, Mexico, and a technical service laboratory in San Cristobal, Mexico.

Exxon Chemical and **Shell Chimie** will construct a 220,000 ton/year linear low density polyethylene plant at an Exxon Chemical affiliate's site in Notre-Dame-de-Gravenchon, France. Start-up is planned for third quarter of 1991. The unit will use Unipol gas-phase technology and have high density polyethylene swing capability. A Groupement d'Interet Economique will own 50 percent, and it will be operated by Exxon's affiliate. Each company will supply its own share of ethylene and would have equal drawing rights to products. Separate marketing and product development activities will be maintained.

Baerlocher USA, a 50-50 joint venture partnership between **ICC Industries'** subsidiary, **Dover Chemical**, and **Baerlocher GmbH's** U.S. subsidiary, will produce liquid mixed metal PVC heat stabilizers, beginning in mid-1990. The joint venture will be based in Dover, OH. Additional plans call for construction of technical service and quality control laboratories.

GenCorp, Fairlawn, OH, and **Kurashiki Kako Co. Ltd.** of Kurashiki, Japan, signed a technical licensing agreement for certain vibration control parts. GenCorp will be the exclusive licensee of Kurashiki Kako's technology in North America. The agreement calls for establishment of a joint-venture sales company, **GKK Automotive**, in the spring of 1990. GKK will be owned 60 percent by GenCorp and 40 percent by Kurashiki Kako.

Tecbelt Pacific, a joint venture between **Goodyear** and **Pacific Dunlop**, will manufacture steel cable conveyor belting and market both steel cable and fabric conveyor belting in Australia. The joint venture will be effective beginning January 1, 1990. The companies also entered into a commercial marketing agreement through the Dunlop Industrial Group that covers the sale and marketing of power transmission products and industrial hose in Australia.